



Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

Subject:
Earthwork Quantities
for Separate Grading
and Paving Contracts

CONSTRUCTION MEMORANDUM NO. 02-67
DESIGN MEMORANDUM NO. 02-50

Effective: May 31, 2002

Expires: Indefinite

This memorandum supersedes and replaces joint Construction Memorandum 95-67 and Design Memorandum 95-50 dated January 3, 1995.

The purpose of this memorandum is to establish design and construction guidelines for earthwork quantities for pregrading contracts and for the subsequent paving contracts which are to be constructed on pregraded sections. Frequently, the paving contractor is faced with the problem of either wasting substantial quantities of excess earth or obtaining borrow or furnished excavation to construct the subgrade to the cross sections shown in the paving contract. The following guidelines should be used by Department personnel to improve plan preparation and construction operations and to provide proper compensation to the paving contractor when extra work is required.

GUIDELINES FOR DESIGNERS

- A. For pregrading contracts the grading cross sections should parallel the pavement and shoulder structures which will ultimately be constructed. Occasionally, special conditions may dictate a different grading cross section. In such cases accurate earthwork quantities required to construct the final paving cross section must be shown in the paving contract.
- B. For paving contracts on pregraded sections the designer should not make the earthwork included in the cost of paving or use "token" quantities to establish unit prices. Such practices can be unfair to the Contractor and the Department. Earthwork quantities should be determined and paid for by one of the following methods as appropriate.
 1. When a pregrading contract is to be completed several months before the advertising of the paving contract, new cross sections should be taken to accurately establish earthwork quantities. Payment is to be made at the contract unit prices for Earth Excavation and/or Borrow or Furnished Excavation.
 2. When the paving contract is to be advertised prior to the completion of the pregrading contract, accurate earthwork quantities cannot be determined for bidding purposes. In this case Article 301 establishes a pay item for Shaping and Grading Roadway for the roadway completed by the pregrade contract within the 50 mm (2 in) tolerance contained in Article 212.02. This Article also states that any earthwork required outside of the 50 mm (2 in) tolerance will be paid for as extra work in accordance with Article 109.04.

GUIDELINES FOR CONSTRUCTION PERSONNEL

- A. On pregrading contracts the Resident should require strict conformance with the 50 mm (2 inch) tolerance contained in Article 212.02. To verify conformance the Resident must set grade stakes at 15 meter (50 foot) intervals. Closer intervals may be required in urban areas, on sharp curves and at intersections or ramp terminals. Grade stakes should be set for the shoulders as well as for pavement subgrade.
- B. On paving contracts where it was not possible to determine accurate earthwork quantities for bidding purposes and the contract contains a pay item for grading and shaping the roadway, original cross sections must be taken to document the as-built condition of the pregrading contract.



Gary Gould, P.E.
Engineer of Construction



Mike Hine, P.E.
Engineer of Design

Attachment

Sample Special Provision

GRADING AND SHAPING ROADWAY

This work shall consist of grading and shaping of the subgrade to the lines and grades shown on the plans and in accordance with Section 212 of the Standard Specifications.

Surplus excavated material shall be disposed of as directed by the Engineer. If additional material is required it shall be obtained from the right-of-way.

GRADING AND SHAPING ROADWAY will be measured in units of 100 lineal feet in horizontal distances along baselines for depths of excavation or placement of material not exceeding 2 inches. No allowance will be made for variable width roadways. This work will be paid for at the contract unit price per unit for GRADING AND SHAPING ROADWAY. Excavation or placement of material in excess of 2 inches shall be paid for as extra work in accordance with Article 109.04